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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,906	07/07/2003	Paul Edward Stamets	PS-LifeBox	7924

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09/11/2006

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Penrose, CO 81240

EXAMINER

AFREMOVA, VERA

ART UNIT	PAPER NUMBER
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1651

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,906

Applicant(s)

STAMETS, PAUL EDWARD

Examiner

Vera Afremova

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27,28,33-46,48 and 97-99 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27,28,33-46,48 and 97-99 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/29/2005
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claims 27, 28, 33-46, 48, 97 and 98 as amended and new claim 99 (4/27/2006) are pending.

Election/Restrictions

Applicant's election without traverse of the Group II in the reply filed on 4/27/2006 is acknowledged.

Applicant indicates that all presently pending claims encompass the use of "cardboard" material and, therefore, elected by applicant (response page 6). Thus, the restriction requirement is withdrawn herein.

Claim Rejections - 35 USC § 112

Claims 40, 41, 44 and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 40 and 41 are confusing and indefinite as related to the presence and/or absence of liquid in the claimed product. It is unclear whether the claimed product includes or excludes "liquid". The instant claims 40 and 41 encompass absence of "liquid" but they depend on claim(s) 38 and 39 that require "liquid" as an additional component. Thus, at the very least the claims 40 and 41 are improper dependent claims.

Claims 44 and 45 encompass incorporation of "an educational kit" such as "map" and, thus, they appear to extend rather than further limit the claimed invention. Claims 44 and 45 are indefinite, confusing and they do not make sense because they encompass the use of "cardboard" material as "educational kit" or "map" wherein the "cardboard" material is "infused" with the

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fungal inoculant accordingly to the preceding claims 35 and 42. Thus, the concept of the educational map infused with fungal inoculant is unclear as claimed and when read in the light of specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 27, 28, 33-43, 48, 97-99 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,589,225 (Stensaas).

Claims are directed to a composition that is a delivery system for mycotechnologies as intended to benefit plant growth wherein the composition comprises 1) a “cardboard” box material, 2) a fungal inoculant of saprophytic and mycorrhizal fungi selected from the group consisting of spores, mycelium, powdered mushrooms and combinations thereof; and 3) seeds. Some claims are further directed to seeds of various plants. Some claims are further drawn to incorporation of liquids, glues, adhesives, etc. into the composition. Some claims are further drawn to the use of cardboard material that is “infused” with the fungal inoculant. Some claims are further drawn to the use of cardboard material that is corrugated or pressed.

US 4,589,225 (Stensaas) discloses a composition that is a delivery system for mycotechnologies intended to benefit and to fertilize crops and other plants. The disclosed composition comprises 1) a “primary packaging” material, 2) a fungal inoculant or “propagules of MF” microorganisms and 3) seeds; for example: see at col. 4, lines 1-9.

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The disclosed seeds belong to generic plants including crops and woody plants within the broadest meaning of the pending claims 33 and 48.

The disclosed fungal inoculant or "propagules of MF" include spores and mycelium or hyphae (col. 5, line 17; col. 8, line 40). The disclosed "MF" microorganisms are generic mycorrhizal fungi that include the ecto- and endo- forms that are capable to colonize root surfaces and root insides (col.1, lines 30-40) and, thus, the "MF" microbial inoculant as disclosed falls within the broadest reasonable meaning of the claimed terms "saprophytic" and "mycorrhizal fungi" of the claims 1 and 98.

The "primary packaging" is a "cardboard" box material such as cellulosic fibers (col. 5, lines 23-26) that is shaped into desired forms including corrugated cardboard-type packages (col. 10, lines 24-33) within the meaning of the claims 1, 36 and 99, for example. The disclosed composition is provided with an outer cover or envelope (col.4, lines 30-33) and, thus, the fungal inoculant and seeds "are packaged separately from the cardboard box" materials within the meaning of the claim 28.

The disclosed delivery system might be dry, moist or wet (col. 4, line 29) and, thus, it comprises liquid that is present or that is removed within the meaning of the pending claims 34 and 38-41. The disclosed delivery system incorporates glues, adhesives, etc.; for example: see col. 8, lines 48-49.

The cited patent teaches the concept of cardboard box material being "infused" with the fungal inoculant (fig. 7, for example) since the fungal spores and mycelium are incorporated into the cellulosic support matrix that is shaped into strips or cardboard packages (col. 10, lines 26-33).

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Thus, the cited patent US 4,589,225 (Stensaas) teaches a delivery system for mycotechnologies that comprises identical components as required for the claimed product.

Thus, the cited patent US 4,589,225 (Stensaas) anticipates the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27, 28, 33-46, 48 and 97-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,589,225 (Stensaas) taken with US 5,022,182 (Anderson) and Ineichen et al. ("Changes in the fungus-specific, soluble-carbohydrate pool during rapid and synchronous ectomycorrhiza formation of *Picea abies* with *Pisolithus tinctorius*". Mycorrhiza. 1992, 2(1), pages 1-7).

Claims 27, 28, 33-43, 48 and 97-99 as above. Some claims are further drawn to the presence of additional "educational" materials and rescue kit components made from or packaged in cardboard materials.

The cited patent US 4,589,225 (Stensaas) is relied upon as explained above for the disclosure of a product such as a mycotechnologie delivery system intended to benefit plant growth and to fertilize crops and other plants that comprises cellulosic matrix used for making cardboard packages, fungal inoculant of mycorrhizal microorganisms and plant seeds. The microorganisms and plant seeds combined with cardboard materials are generic as disclosed by

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US 4,589,225 (Stensaas). However, the reference by Ineichen et al. demonstrates that mycorrhizal microorganism such as *Pisolithus tinctorius* is capable to colonize cardboard materials and develop ectomycorrhiza on root systems of plants such as *Picea abies*, for example: see abstract.

US 4,589,225 (Stensaas) is lacking particular disclosure about the presence of additional "educational" materials and rescue kit components made from or packaged in cardboard materials. However, US 5,022,182 (Anderson) demonstrates incorporation of informational tags and indicators fabricated from cardboard (col. 8, lines 14-17) into the delivery systems of seeds and plant fertilizers (Fig. 1-9) including beneficial microorganisms (col. 9, lines 17-19).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to use cardboard materials and boxes for delivery of mycotechnologie systems as taught, suggested and adequately demonstrated by the cited prior art. Thus, the claimed invention as a whole was clearly *prima facie* obvious, especially in the absence of evidence to the contrary.

The claimed subject matter fails to patentably distinguish over the state art as represented by the cited references. Therefore, the claims are properly rejected under 35 USC § 103.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Afremova whose telephone number is (571) 272-0914. The examiner can normally be reached from Monday to Friday from 9.30 am to 6.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached at (571) 272-0926.

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The fax phone number for the TC 1600 where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 1600, telephone number is (571) 272-1600.

Vera Afremova

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August 30, 2006

A handwritten signature in black ink, appearing to read 'V. Afremova', with a long horizontal flourish extending to the right.

VERA AFREMOVA

PRIMARY EXAMINER